

User's Guide and Operating Information

bel canto



S500 Dual Mono Audio Amplifier

Bel Canto Design, LTD.
221 1st Street North
Minneapolis, MN 55401
Phone: (612) 317.4550
Fax: (612) 359.9358
www.belcantodesign.com
Info@belcantodesign.com
©2005 Bel Canto Design, LTD

The Bel Canto Design e.One Series is a perfect example of what can be accomplished when elegant engineering and depth of empirical knowledge are combined. All components are selected for high sound quality, precision, technical performance, and material quality. Bel Canto's circuit designs and component quality will provide superb performance and years of listening satisfaction.

S500 Dual Mono Audio Amplifier

Power Amplifiers

T A B L E O F C O N T E N T S

Bel Canto Design Statement	.3
Design Features	.4
Unpacking	.5
Initial Setup and Operation	.6, 7
Specifications	.8

Get Closer

Bel Canto Design audio products are designed to bring you closer to the power and beauty of your music. Our goal is simply to provide the most expressive and powerful musical experience outside of the live event and bring some of the greatest musicians and their performances into the intimacy of your home. We design equipment which is easy to own, use and live with. We fully expect that your enjoyment and appreciation of your Bel Canto purchase will grow as you live with it and experience all of the fine audio subtleties that emerge.

Bel Canto Design

Design Features

The e.One S500 amplifier is a dual-mono audio power amplifier that delivers over 400 watts into 4 ohm loads. Each amplifier contains its own dedicated regulated power supply for all amplifier stages, including the output section. This is achieved in a compact and elegant product through our adaptation of the latest analog switching amplifier and power supply technology from the ICEpower group.

A proprietary Bel Canto input stage provides optimally balanced drive signal into the amplifier and maximizes common mode rejection while minimizing distortion and noise components. Use of high quality Caddock resistors and ultra-low ESR solid electrolytic capacitors insures the most musical and transparent performance.

This technology brings unprecedented performance gains in absolute musical performance. The regulated power supply and fully balanced analog switching amplifier architecture liberates your loudspeakers to perform at their best. The ultra-low noise operation insures that the most subtle of musical expressions comes through with palpable clarity.

The superb measured performance insures that harmonic and intermodulation distortion don't interfere with the pristine beauty or raw power of the musical message.

The e.One series amplifiers from Bel Canto insure that you fully experience the musical intensity and beauty of your favorite artists.

Warm Up

The amplifier's sonic performance will start to stabilize after approximately 100 hours of continuous power up. We recommend that the amplifier remains powered for optimum performance.

Unpacking

Unpacking

The S500 Amplifier box contains:

- 1 – User's Guide
- 1 - Power Cable for connection to utility power [1.85m, 6' long]
- 1 – S500 Amplifier.
- 1 - Owner's Warranty / Registration Sheet

Carefully inspect your new unit and check for shipping damage. If there is any damage, or if any piece is missing, please contact your dealer, distributor or Bel Canto Design.

Save all packing materials as the packing is specially designed to protect the amplifier for shipping or transporting it. If you lose or damage the packing materials or carton, please contact your dealer or distributor before attempting to transport the preamplifier.

The power supply is preset for the proper AC power line voltage before you receive it. The power cable will have the correct plug for your local power system. **If you believe this is not true, please contact your dealer immediately. Do not attempt to alter or change power settings yourself. This will void the warranty.**



Warning!

Do not connect power to this amplifier yet!

This amplifier, like any electrical component, can be dangerous and cause injury unless correct handling procedures are observed and used. Before powering this preamplifier it is necessary to read and follow proper procedures concerning its setup and use.

Any tampering of internal parts will immediately void your warranty.

USA customers: For Warranty Coverage complete and mail the Owner's Registration Papers immediately.

S500 Amplifier Rear Panel Connections



S500 Amplifier Rear Panel

Never Connect Either the Positive or Negative Speaker Output to Any Ground Contact!

Connecting any Speaker Output on the S500 to Ground will cause the amplifier to go into protection and could damage the amplifier and void the warranty.

- 1) Power Switch: Power is on when the switch is toggled to the I position and off in the O position.
- 2) Input Connections and RCA/XLR switch: When using RCA cables for the input insure that the RCA/XLR switch is pressed in to the RCA position. When using XLR cables insure that the switch is out in the XLR position. **Do not connect both XLR and RCA cables to the inputs!**
- 3) Output Connections: Attach your loudspeakers to the output connectors, insure that the polarity of each speaker is correct and the same so that no phase inversion can occur.

Never Connect Either the Positive or Negative Speaker Output to Any Ground Contact!

- 4) IEC power cord jack: Connect a heavy gauge power cord from this jack to the wall power supply. Note the power setting indicated on the back of the amplifier before connecting the power.

When all connections to and from the amplifier have been made then double check everything, insure that the preamplifier is powered on and set to a Mute setting and power on the S500.

What to do if there is hum or ground noise:

- 1) Check that the RCA/XLR switch is in the correct position for the type of connection being used.
- 2) Insure that the preamplifier or any source components are not producing hum by setting the preamplifier to a MUTE or Standby setting.
- 3) The design of the amplifier reduces the chance for ground loop induced hum but we still recommend that you use shorter interconnect cables to the preamplifier and connect all power cables to a common outlet box or power conditioner unit to reduce the possibility for ground current noise being induced into the audio signal path.

Front Panel Indicator Lamp

The small blue LED lamp indicates that the power is connected to the amplifier and that the power switch is in the ON position. If the amplifier detects a fault or short circuit in the output connections then it will go into a protection mode and stop playing. If this occurs toggle the power switch to the OFF position and check the speaker cabling to insure that no speaker output is either shorted together or connected to a ground.

When you are certain that the loudspeaker cabling is correct then power the unit ON again and insure that the Blue lamp is lit and that music will play.

Specifications

S500 Power Amplifier

Maximum Power Output/Channel:	.500W 4 ohms, 250W 8 ohms
Power Output 1% THD/Channel:	.370W 4 ohms, 200W 8 ohms
Minimum Load:	3 ohms
Frequency Response:	+/-3 dB 1.5Hz-70KHz, all loads
THD+N:	.0.003% 1W, 1KHz, 4 ohms
IMD (CCIF):	.0.0003%, 1W, 14:15KHz, 4 ohms
Output noise:	.35uVRMS A-weighted 10Hz-20KHz
Voltage gain:	.27dB (single ended or balanced input)
Damping factor:	.>1000
Output Impedance at 100Hz	.<8 milliohms
Dynamic Range:	.121dB
Input Voltage for Max Output	.2Vrms
Input connections:	.Single-ended RCA or balanced XLR
RCA input impedance:	.100Kohms
Balanced input impedance:	.200Kohms
Output connections:	.2-sets WBT 5-way binding posts
Standby Power:	.19W
Size:	.8.5x3.5x12[inches], 216x76x305[mm] (WxHxD)
Weight:	.15lbs, 7Kg
Features and specifications are subject to improvements and changes without prior notice.	

Bel Canto Design, LTD.
221 1st Street North
Minneapolis, MN 55401
Phone: (612) 317.4550
Fax: (612) 359.9358
www.belcantodesign.com
Info@belcantodesign.com
©2008 Bel Canto Design, LTD
e.One™ is a trademark of Bel Canto Design, LTD